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EXAMINER
BRYANT, DOUGLAS J.

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS,
WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *6/24/2005*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *24 June 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date *6/24/2005*.

4)☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

Claim Construction

The following elements are not construed under 35 U.S.C. 112, 6th paragraph:

     a. As per claim 8 and 9: "polling means"

     b. As per claim 8 and 10: "comparison means"

     c. As per claim 10: "allocation means"

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly
claiming the subject matter which the applicant regards as his invention.

Claims 5 and 12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claim language in the following claims are not clearly understood.

     a. As per claim 5 and 12, lines 2-4, it is clearly not understood what is meant by "perceptible change in response time". Perceptible change in response time can vary from one user to next. To determine what is perceptible by an end-user is by matter of opinion.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-16 are rejected under 35 U.S.C. 101 as not falling within one of the four statutory categories of invention.

Regarding claim 1, while the claims recite a series of steps or acts to be performed, a statutory "process" under 35 U.S.C. 101 must (1) be tied to a particular machine or apparatus or (2) transform a particular article to a different state or thing (See *In re Bilski,* 545 F.3d 943, 88 USPQ2d 1385 (Fed Cir. 2008)). The instant claims neither transform a particular article nor positively tie to a particular machine or apparatus, and therefore do not qualify as a statutory process.

Regarding claims 8, the claim is directed to a "system" or machine, but fails to disclose physical "things". The claim elements polling means and comparison means can be interpreted as software. Since the word system is recited only in the preamble, and the body of the claim only recites software elements, the claim could reasonably be interpreted as directed to a combination of software elements. While the preamble recites a system, the claim as a whole cannot reasonably be interpreted as a machine, since under 101, a machine is defined as a physical device or a combination of devices having functionalities to effect an action or a result, and the software is not physical devices or objects. Thus, the claim only recites software per se (descriptive material covered in MPEP 2106.01), which constitute as non-statutory subject matter.

Regarding claim 15, the claimed invention in claim 15 is a computer program lacking the necessary physical components (hardware) required for execution. Since

claim 15 is clearly not a process or a composition of matter, it appears to fail to fall

within a statutory category and thus non-statutory.

Regarding claim 16, while the claims recite a series of steps or acts to

be performed, a statutory "process" under 35 U.S.C. 101 must (1) be tied to a particular

machine or apparatus or (2) transform a particular article to a different state or thing

(See *In re Bilski,* 545 F.3d 943, 88 USPQ2d 1385 (Fed Cir. 2008)). The instant claims

neither transform a particular article nor positively tie to a particular machine or

apparatus, and therefore do not qualify as a statutory process. A computer readable

medium is an insignificant extra-solution activity that will not transform an unpatentable

principle into a patentable process.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim 1-5, 8-12 and 15-16 are rejected under 35 U.S.C. 102(e) as being

anticipated by Brenner et al. (Brenner) US Patent No. 6658449.

With respect to claim 1, Brenner teaches on a method of scheduling a

transaction request to a central processing unit in a computing system, comprising the

steps of, for a transaction request, polling at least one central processing unit to determine the current load on the at least one central processing unit (col 1 lines, 53-57); if the current load is below a predetermined threshold, allocating the transaction request to one of the at least one central processing unit (col 1, lines 28-32); or if the current load is above the predetermined threshold, delaying execution of the transaction request for a predetermined time delay, or until polling determines that the load is below the predetermined threshold (col 1, lines 32-35. It is understood that when a queue becomes bottlenecked, transactions are delayed until a load is below a certain threshold and then it is allocated).

With respect to claim 2, Brenner teaches a method in accordance with claim 1, comprising the further step of polling at defined time intervals to determine the system load (col 7, lines 9-10).

With respect to claim 3, Brenner teaches a method in accordance with claim 2, wherein polling continues until the current load drops below the predetermined threshold, at which time the transaction request is allocated (col 8, 13-14 and 23-24).

With respect to claim 4, Brenner teaches a method in accordance with claim 3, wherein the predetermined threshold is achieved when the at least one of a plurality of CPU's becomes idle (col 4, lines 59-54; col 10, lines 23-29).

With respect to claim 5, Brenner teaches a method in accordance with claim 4, wherein the predetermined time delay is chosen such that an end user cannot determine any perceptible change in response time (col 8, lines 15-16).

With respect to claim 8, Brenner teaches A system for scheduling an incoming transaction to a central processing unit in a computing system, comprising: polling means arranged to, on receipt of a transaction request, poll at least once central processing unit to obtain a value for the central processing unit load (col 1, lines 53-57), comparison means arranged to, if the current load is below a predetermined threshold, allocate the transaction request to one of the at least one central processing unit (col 1, lines 28-32), if the current load is above the predetermined threshold, delay execution of the transaction request for a predetermined time period (col 1, lines 28-32).

With respect to claim 9, Brenner teaches a system in accordance with claim 8, wherein the polling means is arranged to continue to poll at defined time intervals to determine the system load (col 7, lines 9-10).

With respect to claim 10, Brenner teaches a system in accordance with claim 9, comprising allocation means which is arranged to allocate the transaction when the comparison means determines that the current load has dropped below the predetermined threshold (col 7, lines 28-30).

With respect to claim 11, Brenner teaches a system in accordance with claim 10, wherein the predetermined threshold is achieved when the at least one of a plurality of CPU's becomes idle (col 4, lines 59-54; col 10, lines 23-29).

With respect to claim 12, Brenner teaches a system in accordance with claim 11, wherein the predetermined time delay is chosen such that an end user cannot determine any perceptible change in response time (col 8, lines 15-16).

With respect to claims 15 and 16, both claims are rejected under the same rationale as claims 1 thru 6.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 6-7 and 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brenner et al. (Brenner) US Patent 6658449.

With respect to claim 6, Brenner teaches a method in accordance with claim 5. Brenner teaches a predetermined threshold, such as 1.5 seconds (Col 7 line 30). However, Brenner does not teach, wherein the predetermined time delay does not exceed 500 milliseconds.

However, it is noted that this is a common sense solution to the problem of
perceptible change in response time, as addressed in claim 5. There are a finite number
of identified predictable solutions that a person of ordinary skill has good reason to
pursue as it relates to perceptible change in response time. The issue with perceptible
change in response time is that an end user cannot discern the difference between .5
seconds and 1.5 seconds. The predictable solution of 500 milliseconds (.5 seconds) is
an arbitrary number and it would be obvious to try and subsequently solve the issue of
predetermine time delays as it relates to perceptible change in response time (See
MPEP 2141). It also follows that a person of ordinary skill would recognize that the
proper methods for increasing the efficiency of a transaction system, as it relates to
claim 5, is to delay a transaction with a predetermined time that an end user cannot
determine any perceptible change in responds time; the primary example being a
predetermined time delay does not exceed 500 milliseconds, as in claim 5. A person of
ordinary skill in the art would further recognize the well known methods of using
different load balancing techniques. Therefore, it would have been prima facie
obviousness to a person of ordinary skill in the art to modify 1.5 seconds to .5 second
taught by Brenner.

With respect to claim 7, Brenner teaches a method in accordance with claim 5.
However, Brenner does not teach wherein the predetermined time delay is in the order
of one to fifteen time slice intervals.

However, it is noted that this is a common sense solution to the problem of perceptible change in response time, as addressed in claim 5. There are a finite number of identified predictable solutions that a person of ordinary skill has good reason to pursue as it relates to perceptible change in response time. The issue with perceptible change in response time is that an end user cannot discern the difference between one to fifteen time slice intervals or twenty time slice intervals. The predictable solution of one to fifteen time slice intervals is an arbitrary number and it would be obvious to try and subsequently solve the issue of predetermine time delays as it relates to perceptible change in response time (See MPEP 2141). It also follows that a person of ordinary skill would recognize that the proper methods for increasing the efficiency of a transaction system, as it relates to claim 5, is to delay a transaction with a predetermined time that an end user cannot determine any perceptible change in responds time; the primary example being a predetermined time delay is in the order of one to fifteen time slice intervals, as in claim 5. A person of ordinary skill in the art would further recognize the well known methods of using different load balancing techniques. Therefore, it would have been prima facie obviousness to a person of ordinary skill in the art to minimize the number of time slices if possible depended upon the operating system being used.

With respect to claim 13, Brenner teaches a system in accordance with claim 12. Brenner teaches a predetermined threshold, such as 1.5 seconds (Col 7 line 30) however, Brenner does not teach wherein the predetermined time delay does not exceed 500 milliseconds.

However, it is noted that this is a common sense solution to the problem of perceptible change in response time, as addressed in claim 12. There are a finite number of identified predictable solutions that a person of ordinary skill has good reason to pursue as it relates to perceptible change in response time. The issue with perceptible change in response time is that an end user cannot discern the difference between .5 seconds and 1.5 seconds. The predictable solution of 500 milliseconds (.5 seconds) is an arbitrary number and it would be obvious to try and subsequently solve the issue of predetermine time delays as it relates to perceptible change in response time (See MPEP 2141). It also follows that a person of ordinary skill would recognize that the proper methods for increasing the efficiency of a transaction system, as it relates to claim 12, is to delay a transaction with a predetermined time that an end user cannot determine any perceptible change in responds time; the primary example being a predetermined time delay does not exceed 500 milliseconds, as in claim 12. A person of ordinary skill in the art would further recognize the well known methods of using different load balancing techniques. Therefore, it would have been prima facie obviousness to a person of ordinary skill in the art to modify 1.5 seconds to .5 second taught by Brenner.

With respect to claim 14, Brenner teaches a method in accordance with claim 12. However, Brenner does not teach wherein the predetermined time delay is in the order of one to fifteen time slice intervals.

However, it is noted that this is a common sense solution to the problem of perceptible change in response time, as addressed in claim 12. There are a finite number of identified predictable solutions that a person of ordinary skill has good reason to pursue as it relates to perceptible change in response time. The issue with perceptible change in response time is that an end user cannot discern the difference between one to fifteen time slice intervals or twenty time slice intervals. The predictable solution of one to fifteen time slice intervals is an arbitrary number and it would be obvious to try and subsequently solve the issue of predetermine time delays as it relates to perceptible change in response time (See MPEP 2141). It also follows that a person of ordinary skill would recognize that the proper methods for increasing the efficiency of a transaction system, as it relates to claim 12, is to delay a transaction with a predetermined time that an end user cannot determine any perceptible change in responds time; the primary example being a predetermined time delay is in the order of one to fifteen time slice intervals, as in claim 12. A person of ordinary skill in the art would further recognize the well known methods of using different load balancing techniques. Therefore, it would have been prima facie obviousness to a person of ordinary skill in the art to minimize the number of time slices if possible depended upon the operating system being used.

Conclusion

The prior art made of record and not relied upon is considered pertinent to the applicant's disclosure. Nage (U.S. Patent No. 6006248), Borcherding et al. (U.S. Patent

No. 5303369) and Islam et al. (U.S. Publication No. 2004/0103194) teach methods of

load balancing and scheduling. Porterfield (U.S. Patent No. 6141715) and Bishop et al.

(U.S. Patent No. 6049798) teach methods of resource monitoring and allocation.

Condor – A hunter of Idle Workstation is a white paper written by Litzkow, Livny,

and Mutka from the computer science department at the University of Wisconsin. This

article teaches on the design, implementation, and performance of the Condor

scheduling system and Idle workstations.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Examiner Douglas Bryant, whose telephone number is

571-270-7707. The examiner can normally be reached on Monday-Thursday and

alternate Friday from 8:30 am to 6:30 pm Est.

If attempts to reach examiner by telephone are unsuccessful, the examiner's

supervisor, David Robertson can beach reached on 571-272-4186. The fax phone

number for the organization where this application or proceeding is assigned is 571-

273-8300.

Information regarding the status if an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for published

applications may be obtained from either Private PAIR or Public PAIR. Status

information about unpublished applications is available through Private PAIR only. For

more information about the PAIR system, see http:pair-direct.uspto.gov. Should you

have any questions on access to the Private PAIR system contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

/D. B./
Douglas Bryant
Examiner, Art Unit 4123
March 3, 2009

/Emerson Puente/
Primary Examiner, Art Unit 2113